

## **1.0 GENERAL**

The NCOA<sup>Link</sup> (National Change of Address Linkage System) Product is a product from the SnappCheck Address Management Technologies™ suite that provides mailers with a tool to update and correct mailing lists used for the preparation of mail that will be submitted to the USPS for acceptance and delivery. NCOA<sup>Link</sup> will analyze the names and addresses in mailing lists and provide an updated address where a change of address has been submitted to USPS in order for mail to be delivered to a new address. A CASS-certified ZIP+4 address-matching product matches, standardizes and parses addresses to provide input for NCOA<sup>Link</sup> and name matching. Utilization of the NCOA<sup>Link</sup> Product will allow mailers to keep their address lists up-to-date.

### **1.1 PURPOSE**

- 1.1.1 The purpose of these performance requirements is to establish standard criteria of performance that USPS requires NCOA<sup>Link</sup> Software Developers (“Developers”) to comply with. The software will enable NCOA<sup>Link</sup> Licensees to have access to the following address list services:
- Acceptable standardization and address matching services
  - Detection of undeliverable addresses due to change of address
  - New address when a name and old address match the change of address file
- 1.1.2 Developer's matching software must adhere to specific USPS requirements regarding the services as well as to the matching rules and specifications herein. Developers must utilize Coding Accuracy Support System (CASS) certified software for ZIP+4 processing. In addition, Developers will be tested on a periodic basis using an NCOA<sup>Link</sup> test address file similar to CASS. CASS is an existing USPS certification process available to all commercial firms.
- 1.1.3 Developer is responsible for programming all necessary NCOA<sup>Link</sup> software. Prior to any use, sale and/or distribution of Developer's NCOA<sup>Link</sup> software, Developer must obtain a separate license under one or more of the license categories authorizing said use, sale and/or distribution.

### **1.2 PRODUCT DESCRIPTION**

- 1.2.1 The NCOA<sup>Link</sup> Product utilizes what is referred to as “hash” tables. The hash tables are secure datasets that will only provide new address information when queried with a specific algorithm of the name and old address from a mailer's address list which matches the information as it appears on a Change of Address form (PS 3575).
- 1.2.2 Extensive programming will be required to interface with the NCOA<sup>Link</sup> Product datasets. A software interface will customize the type of input format, provide the output desired and contain appropriate links with ZIP+4 matching software.
- 1.2.3 Periodic updates to the NCOA<sup>Link</sup> Product datasets (hash tables) will be provided via DVD to Licensees. Licensees should utilize the current monthly CASS ZIP+4 product with the NCOA<sup>Link</sup> updates to provide the up-to-date address. Refer to Figure 2 for acceptable use dates of the ZIP+4 process.
- 1.2.4 The Developer and Licensee, in order to utilize the NCOA<sup>Link</sup> product, must meet all requirements and specifications contained within the License Agreement, the most current version of these Performance Requirements, and the most current version of the Software Developer Guide (SDG), unless modified by USPS in writing.

### **1.3 MULTIPLE SERVICE OFFERINGS**

- 1.3.1 Additional processes, such as ZIP+4, DPV and LACS, can be run either independently or interactively with NCOA<sup>Link</sup> processing.
- 1.3.2 Prior to NCOA<sup>Link</sup> processing, input addresses presented to NCOA<sup>Link</sup> must be processed through CASS Certified matching software to obtain ZIP+4 coded, parsed addresses. The ZIP+4 coded, parsed result and the corresponding name will be used to query NCOA<sup>Link</sup>. ZIP+4 results must be obtained within the valid window for processing based on the date NCOA<sup>Link</sup> processing is performed and the chart of valid ZIP+4 dates provided in Figure 2.
- 1.3.3 DPV and LACS are optional for End User Mailers and may be obtained at the licensee's expense. The software required for processing these multiple services may be bundled as a single integrated software package or provided separately for each individual service.

### **2.0 DEFINITION**

- 2.1 In order for a Licensee to use NCOA<sup>Link</sup>, it must submit a series of inquiries to USPS secure hash tables that will yield a new address for the purpose of updating mailing lists when both the name and old address are matched (NCOA<sup>Link</sup> process). Input is in the form of a complete name, a 9-digit ZIP+4 Code and a parsed address. The direct output contains the 11 digit Delivery Point Barcode (DPBC), the move effective date, the middle initial (if present on the COA) and gender identification. The software must convert the information to a normalized street address in accordance with the SDG.

### **3.0 GENERAL REQUIREMENTS**

- 3.1 Any Developer wishing to use, sell and/or distribute NCOA<sup>Link</sup> software must first develop software that utilizes as its address input the 9-digit ZIP+4 Code and parsed address output from a USPS CASS certified software. The NCOA<sup>Link</sup> software will utilize this information along with the complete name as it appears on the input record to obtain a match to a COA. NCOA<sup>Link</sup> cannot assign a ZIP+4 Code nor will it respond to a non-ZIP+4 coded address. The Developer must perform a process quality review. USPS must review and approve the software's performance prior to any actual NCOA<sup>Link</sup> processing occurring in a production environment to ensure that all license requirements are met. Upon USPS determining that Developer has met all requirements in the license and that the software meets all USPS requirements, the USPS will provide the Developer a license for its proposed software.
- 3.2 Developer shall not export the NCOA<sup>Link</sup> Product and/or datasets outside the boundaries of the United States of America or its territories without prior written approval of the USPS.
- 3.3 As a Licensee of the USPS, the Developer agrees that any and all data, source code, or information received from the USPS or otherwise obtained or developed in the course of, or as the result of, the performance of this license shall:
  - 3.3.1 Be kept in strict confidence and shall not be disclosed in any manner to any organization (including professional societies) other than the USPS until released of such obligation by the USPS in writing, and,
  - 3.3.2 When in Developer's possession, be provided with adequate physical, technical and administrative safeguards to prevent unauthorized access, disclosure, misuse, or attention.
- 3.4 Copies of this document and any new updates to the License Agreement, the Performance Requirements, or the Certification Procedures will be posted on the RIBBS website at <http://ribbs.usps.gov/files/NCOALink>.

#### **4.0 SPECIFIC REQUIREMENTS**

- 4.1 Developers must create NCOA<sup>Link</sup> software for licensing that will access the NCOA<sup>Link</sup> Product.
- 4.2 Software must use USPS CASS certified Address Matching software parsed, standardized output to query the NCOA<sup>Link</sup> Product.
- 4.3 Software must contain features to meet the provisions of Standards of Performance as summarized here and detailed in paragraph 8.0 below.
  - a. Record and store required reporting information from list processing.
  - b. Produce reports in expected format upon request.
  - c. Repair all software deficiencies promptly.
- 4.4 Software must generate and maintain all specific reports as required in paragraph 10.0 below.
- 4.5 Software must be capable of:
  - a. Processing full file replacements via DVD.
  - b. Processing address lists of at least 100 unique names and addresses.
  - c. Rejecting address lists of less than 100 unique names and addresses.
  - d. Accessing the NCOA<sup>Link</sup> system as required by the NCOA<sup>Link</sup> Software Developer Guide.
  - e. Translating the new Delivery Point Codes returned into standardized addresses where matches are found.
  - f. Assigning all applicable standard footnote codes.
  - g. Performing the following processing options:

Option	Description	Code
Business only	Software system will provide new address information for Business moves only.	B
Individual only	Software system will provide new address information for Individual moves only.	I
Individual and Business	Software system will provide new address information for Individual and Business moves only.	C
Standard	Software system will not restrict any matches or prohibit the return of information based on move types (Business, Individual or Family).	S

- h. Processing Standard matching logic inquiries in the following order:

Business	Match on business name.
Individual	Match on first name, middle name, surname and title required. Gender is checked and nickname possibilities are considered.
Family	Match on surname only.

- i. Prohibiting surname only matching except as allowed in Standard matching logic.
- j. Providing footnote only processing options.
- k. Providing and storing all statistical reports and data files as required.
- l. Enforcing a 45-day expiration date based on the date of the NCOA<sup>Link</sup> Product.
- m. Providing adequate security that will prohibit unauthorized access to or use of the software and NCOA<sup>Link</sup>.
- n. Processing specialized USPS certification, audit or test files.

- 4.7 Developer shall provide the USPS with access to any resource used in performance of this license and with the necessary equipment and/or reports to monitor compliance at the NCOA<sup>Link</sup> Developer's facility.

## **5.0 BASIC NCOA<sup>Link</sup> PRODUCT OUTPUT**

- 5.1 The software must include USPS' standardized footnotes to provide consistency of products and facilitate USPS evaluation of customer data.
- 5.2 For each address submitted to NCOA<sup>Link</sup>, the software must return the following output:
- Each original unaltered input name and address as it was presented
  - The standardized address appended with the correct ZIP+4/DPC, other postal values and any other intelligence flags or footnotes that result from the CASS processing segment.
  - For each mailing address for which there is a match to the NCOA<sup>Link</sup> hash table(s) as defined in this document, the 11 digit DPBC and a conversion to a standard street address, and standard footnote codes as listed in Figure 1. Software shall assign all applicable standard footnote codes.
  - When a match is made, the following elements must be returned: the move effective date (CCYYMM), specific name and address utilized in the query that obtained the match, and the move type. The move type is determined by the software based on the specific name inquiry utilized to obtain the match.
  - For each mailing address for which there is not a match to the NCOA<sup>Link</sup> hash table(s), the software shall return all elements as appropriate under a and b as well as any standard footnote codes as may be appropriate under Figure 1.
  - The urbanization name information, when applicable.
  - The carrier route information for new (updated) addresses.
  - Delivery Point Validation results, if returned. (Optional)

## **6.0 QUALITY STANDARDS AND TESTING CRITERIA**

- 6.1 The NCOA<sup>Link</sup> software will be subject to periodic process quality reviews (audits) and evaluation of its adherence to the conditions of the NCOA<sup>Link</sup> License Agreement for which it was designed. Please note that the USPS audit file must be processed through the same NCOA<sup>Link</sup> system utilized for mailing list processing.
- 6.2 The NCOA<sup>Link</sup> software will provide the necessary output as described in 5.0 utilizing the specific USPS format as described in Figure 3. Upon notification of the transmission of an audit file, it can be retrieved from Developer's specific USPS account via the internet. The audit output and supporting documentation derived from the NCOA<sup>Link</sup> process will be posted to the same account.
- 6.3 The audit file will test the NCOA<sup>Link</sup> software with a series of known forwardable addresses and known non-forwardable addresses to validate the software's ability to query the NCOA<sup>Link</sup> Product and return the appropriate output responses.
- 6.4 The audit will also verify the administrative output, including all reports, of the NCOA<sup>Link</sup> process.
- 6.5 Auditing will be performed once annually or as specified by the USPS. If necessary, subsequent audits due to failures must be completed within the annual license period to prevent suspension and/or termination.

- 6.6 Upon validation of the results, Developer will receive official notification of the audit results from the USPS.
- 6.7 The software must provide accurately matched responses for at least 99% of the inquiries where data to support these responses are known to be in the USPS file and shall produce no unexpected matches.
- a. The percentage of audit file input name and address records that achieve the correct result shall not be less than 99% when compared to the USPS expected results.
  - b. The audit file output shall not result in a match that is not expected and would result in returning incorrect information that would eventually cause the misdirection of mail.
  - c. The audit file output must correctly provide all NCOA<sup>Link</sup> elements with 100% accuracy.
- 6.8 In the event that a problem is identified by the USPS that is related to the NCOA<sup>Link</sup> process, the USPS will, at its sole discretion, direct correction of the problem and/or exercise the suspension or termination provisions of the License, as it deems appropriate by the situation.

## **7.0 LICENSEE CERTIFICATION**

See Certification Procedures at <http://ribbs.usps.gov/files/NCOALink>.

## **8.0 STANDARDS OF PERFORMANCE**

- 8.1 Software must record Licensee service log, which will be maintained and be made available for Postal Service review for a period of 5 years. This service log shall also be kept on a computer file and shall be submitted to the USPS electronically or on approved electronic media on a monthly basis (see Reports Section for format).
- 8.2 Developer shall repair or have repaired all software deficiencies related to the NCOA<sup>Link</sup> system within 30 days of identification of said deficiencies.

## **9.0 ADVERTISING**

- 9.1 Developer is prohibited from representing to third parties that USPS has certified Developer's software product until USPS issues a software certification notice to Developer. Prior to receiving the software certification notice from USPS, Developer may only represent that it has "applied" to receive software certification, and is prohibited from making any representations or warranties as to the availability of its software and/or the ability of its software to support the NCOA<sup>Link</sup> product.
- 9.2 As stated in Section 1.1, prior to any use, sale and/or distribution of Developer's NCOA<sup>Link</sup> software, Developer must obtain a separate license under one or more of the license categories authorizing said use, sale and/or distribution.

## **10.0 REPORTS**

- 10.1 The software shall be capable of producing a monthly performance report from the service log by system platform. The reports begin on the first day of the month and terminate on the last day of the month and must be kept in sequential order. The log must contain a record for each list processed through the NCOA<sup>Link</sup> system and the resultant statistics. The reports will be maintained and made available for Postal Service review for a period of 5 years at the Licensee's facility. The electronic report file layout follows Section 10.

- 10.2 The monthly performance reports will be named using a four-part eight-character identification scheme. The first character will be "C" to identify it as a Customer Service Log. Characters 2-5 will contain the USPS-assigned four-character Licensee platform identification code. The sixth character will identify the month of the report; refer to the chart following this paragraph. The last two characters will identify the year of the report by the last two digits of the calendar year.

Month	Code
January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	A
November	B
December	C

- 10.3 NCOA<sup>Link</sup> is intended solely for use as a mailing list update tool. Testing of any kind using NCOA<sup>Link</sup> is strongly discouraged by the USPS. However, the USPS does acknowledge that certain testing is necessary. In an effort to obtain an accurate statistical reporting regarding addresses updated by NCOA<sup>Link</sup>, the type of processing must be accurately and consistently recorded. Therefore, the following list of codes must be used to populate the "PROCESSING CATEGORY" field in the service log:

Code	Description	Disposition of Results
EMP TRAIN	File processed as part of employee training.	Results discarded; no update performed or information released.
INT DB TST	Testing involving proprietary Licensee database.	No updates performed; results discarded after analysis.
NORMAL	Process mailing list for update prior to mailing.	COA information obtained and updates performed.
STAGE I	Test of matching performance against USPS self-test file.	Results used for internal program analysis and subsequently discarded.
STAGE II	Test of matching performance scored by USPS.	Output transmitted to USPS for evaluation and discarded when test results finalized.
SYS TEST	File processed as part of system testing such as loading of USPS file updates.	Results discarded; no updates performed or information released.

- 10.4 NCOA<sup>Link</sup> Licensees must electronically transmit all required monthly reports to the NCSC. The software must allow for information retrieval based on an input of a date range.

10.5 Upon request, the software must be capable of producing a hardcopy report summarizing the processing of each list. The report may contain any and all information gathered to fulfill the requirements of Section 10.4 and information from other processes as desired. At a minimum, the processing summary must contain:

- Licensee Company Name
- License ID
- List Name
- Processing Category
- Matching Logic Applied flag
- Class of Mail
- Date NCOA<sup>Link</sup> Processing Completed
- Total Number of Records Processed
- Total Number of Records Matched

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Header Record</b> <b>(page 1 of 3)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
1	4	CUSTOMER ID Alphanumeric. Licensee ID (USPS assigned)	4	X(4)
5	18	NUMBER OF RECORDS Total number of records in the Customer Service Log excluding Header Record	14	9(14)
19	70	Filler	52	X(52)
		<i>The Header Record must contain file totals for all fields in the subsequent Detail Record(s). All field positions in the Header Record correspond to field positions in the Detail Record(s).</i>		
		<i>Fields listed as "Optional – Filler" in the Detail Record are also optional in the Header Record. However, if data is provided in these fields in the Detail Record(s), file totals MUST appear in the Header Record for the corresponding fields.</i>		
		<b>Processing Statistics Summary</b>		
71	81	TOTAL NUMBER OF RECORDS PROCESSED	11	9(11)
82	92	TOTAL NUMBER OF NCOA <sup>Link</sup> QUERIES PERFORMED	11	9(11)
93	103	TOTAL NUMBER OF RECORDS MATCHED	11	9(11)
104	114	TOTAL NUMBER OF RECORDS ZIP+4 CODED OPTIONAL – FILLER	11	9(11)
115	125	TOTAL NUMBER OF RECORDS DPV CONFIRMED OPTIONAL – FILLER	11	9(11)
		<b>Product Information</b>		
126	275	Filler	150	X(150)
		<b>ZIP+4 Match Statistics</b> OPTIONAL – FILLER		
276	286	Total matched to PO Box record OPTIONAL – FILLER	11	9(11)
287	297	Total matched to Highway Contract record with Box number OPTIONAL – FILLER	11	9(11)
298	308	Total matched to Rural Route default OPTIONAL – FILLER	11	9(11)
309	319	Total matched to Firm record OPTIONAL – FILLER	11	9(11)
320	330	Total matched to General Delivery OPTIONAL – FILLER	11	9(11)
331	341	Total matched to Building/Highrise default OPTIONAL – FILLER	11	9(11)
342	352	Total matched to Military ZIP OPTIONAL – FILLER	11	9(11)
353	363	Total matched to Non-deliverable OPTIONAL – FILLER	11	9(11)
364	374	Total matched to Rural Route with Box number OPTIONAL – FILLER	11	9(11)
375	385	Total matched to Street record OPTIONAL – FILLER	11	9(11)
386	396	Total matched to Highway Contract default OPTIONAL – FILLER	11	9(11)
397	407	Total matched to Building/Highrise with secondary OPTIONAL – FILLER	11	9(11)
408	418	Total matched to other OPTIONAL – FILLER	11	9(11)
419	429	Total matched to records with positive LACS flag OPTIONAL – FILLER	11	9(11)
430	440	EWS – No Match Count OPTIONAL – FILLER	11	9(11)
		<b>Footnote Information: Number of responses containing each footnote code:</b>		
		<b>New Address Provided by NCOA<sup>Link</sup></b>		
441	451	A – Match	11	9(11)



<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Header Record</b> <b>(page 2 of 3)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
452	462	91 – Match with Secondary Number Dropped on COA (Old Side)	11	9(11)
463	473	92 – Match with Secondary Number Dropped on Input	11	9(11)
		<b>From NCOA<sup>Link</sup> File Build</b>		
474	484	01 – Match – Foreign Move	11	9(11)
485	495	02 – Match – Moved Left No Address	11	9(11)
496	506	03 – Match – PO Box Closed	11	9(11)
507	517	04 – No Match – Family move from Street Address w/Secondary	11	9(11)
518	528	05 – Match – New 11 digit DPBC is ambiguous	11	9(11)
529	539	06 – No Match – Middle Name Related	11	9(11)
540	550	07 – No Match – Gender Related	11	9(11)
551	561	08 – No Match – Conflicting Instructions	11	9(11)
562	572	09 – No Match – Family move from Highrise default	11	9(11)
573	583	10 – No Match – Family move from Rural/HC Route default	11	9(11)
584	594	11 – No Match – Individual move – Insufficient name data	11	9(11)
595	605	18 – No Match – Family move from General Delivery	11	9(11)
606	616	19 – Match – New Address not ZIP+4 codeable	11	9(11)
617	627	20 – No Match – Multiple Response – Conflicting Directions	11	9(11)
		<b>From NCOA<sup>Link</sup> File Run</b>		
628	638	12 – Match – Middle Name test failed	11	9(11)
639	649	13 – Match – Gender test failed	11	9(11)
650	660	14 – Match – New Address would not convert	11	9(11)
661	671	15 – Match – Individual Name insufficient on input to match	11	9(11)
672	682	16 – Match – Secondary Number discrepancy	11	9(11)
683	693	17 – Match – Different First Name	11	9(11)
		<b>From ZIP+4 Process</b>		
694	704	A1 – No Match	OPTIONAL – FILLER	
705	715	M1 – Primary Number missing	OPTIONAL – FILLER	11 9(11)
716	726	M3 – Primary Number invalid	OPTIONAL – FILLER	11 9(11)
727	737	P1 – Missing PO, RR or HC Box number	OPTIONAL – FILLER	11 9(11)
738	748	P3 – Invalid PO, RR or HC Box number	OPTIONAL – FILLER	11 9(11)
		<b>From DPV Process</b>		
749	759	RR – CMRA Match	OPTIONAL – FILLER	11 9(11)
760	770	CC – Primary Number Match – Secondary present but invalid	OPTIONAL – FILLER	11 9(11)
771	781	N1 – Primary Number Match – Secondary missing	OPTIONAL – FILLER	11 9(11)
782	792	R1 – CMRA Match – PMB number not present	OPTIONAL – FILLER	11 9(11)
		<b>Move Activity Summary</b>		
		Age based on month and year of process date.		
793	803	ADDRESSES MATCHED MONTH 0	11	9(11)
804	814	ADDRESSES MATCHED MONTH 1	11	9(11)
815	825	ADDRESSES MATCHED MONTH 2	11	9(11)
826	836	ADDRESSES MATCHED MONTH 3	11	9(11)
837	847	ADDRESSES MATCHED MONTH 4	11	9(11)
848	858	ADDRESSES MATCHED MONTH 5	11	9(11)
859	869	ADDRESSES MATCHED MONTH 6	11	9(11)
870	880	ADDRESSES MATCHED MONTH 7	11	9(11)

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Header Record</b> <b>(page 3 of 3)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
881	891	ADDRESSES MATCHED MONTH 8	11	9(11)
892	902	ADDRESSES MATCHED MONTH 9	11	9(11)
903	913	ADDRESSES MATCHED MONTH 10	11	9(11)
914	924	ADDRESSES MATCHED MONTH 11	11	9(11)
925	935	ADDRESSES MATCHED MONTH 12	11	9(11)
936	946	ADDRESSES MATCHED MONTH 13	11	9(11)
947	957	ADDRESSES MATCHED MONTH 14	11	9(11)
958	968	ADDRESSES MATCHED MONTH 15	11	9(11)
969	979	ADDRESSES MATCHED MONTH 16	11	9(11)
980	990	ADDRESSES MATCHED MONTH 17	11	9(11)
991	1001	ADDRESSES MATCHED MONTH 18	11	9(11)
1002	1012	ADDRESSES MATCHED MONTH 19	11	9(11)
1013	1023	ADDRESSES MATCHED MONTH 20	11	9(11)
1024	1034	ADDRESSES MATCHED MONTH 21	11	9(11)
1035	1045	ADDRESSES MATCHED MONTH 22	11	9(11)
1046	1056	ADDRESSES MATCHED MONTH 23	11	9(11)
1057	1067	ADDRESSES MATCHED MONTH 24	11	9(11)
1068	1078	ADDRESSES MATCHED MONTH 25	11	9(11)
1079	1089	ADDRESSES MATCHED MONTH 26	11	9(11)
1090	1100	ADDRESSES MATCHED MONTH 27	11	9(11)
1101	1111	ADDRESSES MATCHED MONTH 28	11	9(11)
1112	1122	ADDRESSES MATCHED MONTH 29	11	9(11)
1123	1133	ADDRESSES MATCHED MONTH 30	11	9(11)
1134	1144	ADDRESSES MATCHED MONTH 31	11	9(11)
1145	1155	ADDRESSES MATCHED MONTH 32	11	9(11)
1156	1166	ADDRESSES MATCHED MONTH 33	11	9(11)
1167	1177	ADDRESSES MATCHED MONTH 34	11	9(11)
1178	1188	ADDRESSES MATCHED MONTH 35	11	9(11)
1189	1199	ADDRESSES MATCHED MONTH 36	11	9(11)
1200	1210	ADDRESSES MATCHED MONTH 37	11	9(11)
1211	1221	ADDRESSES MATCHED MONTH 38	11	9(11)
1222	1232	ADDRESSES MATCHED MONTH 39	11	9(11)
1233	1243	ADDRESSES MATCHED MONTH 40	11	9(11)
1244	1254	ADDRESSES MATCHED MONTH 41	11	9(11)
1255	1265	ADDRESSES MATCHED MONTH 42	11	9(11)
1266	1276	ADDRESSES MATCHED MONTH 43	11	9(11)
1277	1287	ADDRESSES MATCHED MONTH 44	11	9(11)
1288	1298	ADDRESSES MATCHED MONTH 45	11	9(11)
1299	1309	ADDRESSES MATCHED MONTH 46	11	9(11)
1310	1320	ADDRESSES MATCHED MONTH 47	11	9(11)
1321	1331	ADDRESSES MATCHED MONTH 48	11	9(11)
1332	1600	FILLER	269	X(269)
		CR/LF Carriage Return/Line Feed required at end of each record.		

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Detail Record</b> <b>(page 1 of 5)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
1	4	LICENSEE ID Platform ID assigned by the USPS.	4	X(4)
5	10	NAICS/SIC North American Industry Classification System / Standard Industry Code	6	9(6)
11	12	PROCESSING FREQUENCY Number of times per year list processed. If update frequency not established for a particular list, fill with "99".	2	9(2)
13	18	FILLER	6	X(6)
19	28	PROCESSING CATEGORY Set values to identify the type of processing performed. EMP TRAIN, INT DB TST, MKTG TEST, PROD RUN, STAGE I, STAGE II, SYS TEST	10	X(10)
29	33	FILLER	5	X(5)
34	34	MATCHING LOGIC APPLIED S = Standard (Business, Individual and Family matches allowed) I = Individual only B = Business only C = Individual and Business only	1	X(1)
35	35	FILLER	1	X(1)
36	36	CLASS OF MAIL Alphanumeric. Class of mail to be used for mailings produced from customer mailing list. A = First-Class only B = Periodicals only C = Standard Mail only D = Package Services only E = First-Class & Periodicals F = First-Class & Standard Mail G = First-Class & Package Services H = Periodicals & Standard Mail I = Periodicals & Package Services J = Standard Mail & Package Services K = First-Class, Periodicals & Standard Mail L = First-Class, Periodicals & Package Services M = First-Class, Standard Mail & Package Services N = Periodicals, Standard Mail & Package Services O = First-Class, Periodical, Standard Mail, Package Services	1	X(1)
		<b>Processing Date Information</b>		
37	44	FILLER	8	9(8)
45	52	DATE NCOA <sup>Link</sup> PROCESSING BEGAN Numeric. Format CCYYMMDD.	8	9(8)
53	60	DATE NCOA <sup>Link</sup> PROCESSING COMPLETED Numeric. Format CCYYMMDD.	8	9(8)
61	68	FILLER	8	9(8)
69	70	TOTAL PROCESSING DAYS	2	9(2)
		<b>Processing Statistics Summary</b>		
71	81	TOTAL NUMBER OF RECORDS PROCESSED Total number of records presented on the original input list.	11	9(11)
82	92	TOTAL NUMBER OF NCOA <sup>Link</sup> QUERIES PERFORMED Total number of all queries made into NCOA <sup>Link</sup> including all variations of name and address attempted for each input record. (ie: nickname attempts; dropped secondary attempts)	11	9(11)

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Detail Record</b> <b>(page 2 of 5)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
93	103	TOTAL NUMBER OF RECORDS MATCHED	11	9(11)
104	114	TOTAL NUMBER OF RECORDS ZIP+4 CODED (NOTE: Footnote "AA")	11	9(11)
		<b>OPTIONAL – FILLER</b>		
115	125	TOTAL NUMBER OF RECORDS DPV CONFIRMED (NOTE: Footnote "BB")	11	9(11)
		<b>OPTIONAL – FILLER</b>		
		<b>ZIP+4 Product Information</b>		
		<b>OPTIONAL – FILLER</b>		
126	155	ZIP+4 Software Name	30	X(30)
156	167	ZIP+4 Software Version	12	X(12)
168	175	ZIP+4 Directory (Data) Release Date	8	9(8)
		<b>NCOA<sup>Link</sup> Product Information</b>		
176	205	NCOA <sup>Link</sup> Software Name	30	X(30)
206	217	NCOA <sup>Link</sup> Software Version	12	X(12)
218	225	NCOA <sup>Link</sup> Data Release Date	8	9(8)
		<b>DPV Product Information</b>		
		<b>OPTIONAL – FILLER</b>		
226	255	DPV Software Name	30	X(30)
256	267	DPV Software Version	12	X(12)
268	275	DPV Data Release Date	8	9(8)
		<b>ZIP+4 Match Statistics</b>		
		<b>OPTIONAL – FILLER</b>		
276	286	Total matched to PO Box record	11	9(11)
287	297	Total matched to Highway Contract record with Box number	11	9(11)
		<b>OPTIONAL – FILLER</b>		
298	308	Total matched to Rural Route default	11	9(11)
309	319	Total matched to Firm record	11	9(11)
320	330	Total matched to General Delivery	11	9(11)
331	341	Total matched to Building/Highrise default	11	9(11)
342	352	Total matched to Military ZIP	11	9(11)
353	363	Total matched to Non-deliverable	11	9(11)
364	374	Total matched to Rural Route with Box number	11	9(11)
		<b>OPTIONAL – FILLER</b>		
375	385	Total matched to Street record	11	9(11)
386	396	Total matched to Highway Contract default	11	9(11)
397	407	Total matched to Building/Highrise with secondary	11	9(11)
		<b>OPTIONAL – FILLER</b>		
408	418	Total matched to other	11	9(11)
419	429	Total matched to records with positive LACS flag	11	9(11)
		<b>OPTIONAL – FILLER</b>		
430	440	EWS – No Match Count	11	9(11)
		<b>Footnote Information: Number of responses containing each footnote code:</b>		
		<b>New Address Provided by NCOA<sup>Link</sup></b>		
441	451	A – Match	11	9(11)
452	462	91 – Match with Secondary Number Dropped on COA (Old Side)	11	9(11)
463	473	92 – Match with Secondary Number Dropped on Input	11	9(11)
		<b>From NCOA<sup>Link</sup> File Build</b>		
474	484	01 – Match – Foreign Move	11	9(11)
485	495	02 – Match – Moved Left No Address	11	9(11)

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Detail Record</b> <b>(page 3 of 5)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
496	506	03 – Match – PO Box Closed	11	9(11)
507	517	04 – No Match – Family move from Street Address w/Secondary	11	9(11)
518	528	05 – Match – New 11 digit DPBC is ambiguous	11	9(11)
529	539	06 – No Match – Middle Name Related	11	9(11)
540	550	07 – No Match – Gender Related	11	9(11)
551	561	08 – No Match – Conflicting Instructions	11	9(11)
562	572	09 – No Match – Family move from Highrise default	11	9(11)
573	583	10 – No Match – Family move from Rural/HC Route default	11	9(11)
584	594	11 – No Match – Individual move – Insufficient name data	11	9(11)
595	605	18 – No Match – Family move from General Delivery	11	9(11)
606	616	19 – Match – New Address not ZIP+4 codeable	11	9(11)
617	627	20 – No Match – Multiple Response – Conflicting Directions	11	9(11)
		<b>From NCOA<sup>Link</sup> File Run</b>		
628	638	12 – Match – Middle Name test failed	11	9(11)
639	649	13 – Match – Gender test failed	11	9(11)
650	660	14 – Match – New Address would not convert	11	9(11)
661	671	15 – Match – Individual Name insufficient on input to match	11	9(11)
672	682	16 – Match – Secondary Number discrepancy	11	9(11)
683	693	17 – Match – Different First Name	11	9(11)
		<b>From ZIP+4 Process</b>	<b>OPTIONAL – FILLER</b>	
694	704	A1 – No Match	<b>OPTIONAL – FILLER</b>	11 9(11)
705	715	M1 – Primary Number missing	<b>OPTIONAL – FILLER</b>	11 9(11)
716	726	M3 – Primary Number invalid	<b>OPTIONAL – FILLER</b>	11 9(11)
727	737	P1 – Missing PO, RR or HC Box number	<b>OPTIONAL – FILLER</b>	11 9(11)
738	748	P3 – Invalid PO, RR or HC Box number	<b>OPTIONAL – FILLER</b>	11 9(11)
		<b>From DPV Process</b>	<b>OPTIONAL – FILLER</b>	
749	759	RR – CMRA Match	<b>OPTIONAL – FILLER</b>	11 9(11)
760	770	CC – Primary Number Match – Secondary present but invalid	<b>OPTIONAL – FILLER</b>	11 9(11)
771	781	N1 – Primary Number Match – Secondary missing	<b>OPTIONAL – FILLER</b>	11 9(11)
782	792	R1 – CMRA Match – PMB number not present	<b>OPTIONAL – FILLER</b>	11 9(11)
		<b>Move Activity Summary</b>		
		Age based on month and year of process date.		
793	803	ADDRESSES MATCHED MONTH 0 Total number of matches made with Move Effective Date (MED) corresponding to the process date.	11	9(11)
804	814	ADDRESSES MATCHED MONTH 1 Total number of matches made with MED 1 month prior to process date.	11	9(11)
815	825	ADDRESSES MATCHED MONTH 2 Total number of matches made with MED 2 months prior to process date.	11	9(11)
826	836	ADDRESSES MATCHED MONTH 3 Total number of matches made with MED 3 months prior to process date.	11	9(11)
837	847	ADDRESSES MATCHED MONTH 4 Total number of matches made with MED 4 months prior to process date.	11	9(11)
848	858	ADDRESSES MATCHED MONTH 5 Total number of matches made with MED 5 months prior to process date.	11	9(11)

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Detail Record</b> <b>(page 4 of 5)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
859	869	ADDRESSES MATCHED MONTH 6 Total number of matches made with MED 6 months prior to process date.	11	9(11)
870	880	ADDRESSES MATCHED MONTH 7 Total number of matches made with MED 7 months prior to process date.	11	9(11)
881	891	ADDRESSES MATCHED MONTH 8 Total number of matches made with MED 8 months prior to process date.	11	9(11)
892	902	ADDRESSES MATCHED MONTH 9 Total number of matches made with MED 9 months prior to process date.	11	9(11)
903	913	ADDRESSES MATCHED MONTH 10 Total number of matches made with MED 10 months prior to process date.	11	9(11)
914	924	ADDRESSES MATCHED MONTH 11 Total number of matches made with MED 11 months prior to process date.	11	9(11)
925	935	ADDRESSES MATCHED MONTH 12 Total number of matches made with MED 12 months prior to process date.	11	9(11)
936	946	ADDRESSES MATCHED MONTH 13 Total number of matches made with MED 13 months prior to process date.	11	9(11)
947	957	ADDRESSES MATCHED MONTH 14 Total number of matches made with MED 14 months prior to process date.	11	9(11)
958	968	ADDRESSES MATCHED MONTH 15 Total number of matches made with MED 15 months prior to process date.	11	9(11)
969	979	ADDRESSES MATCHED MONTH 16 Total number of matches made with MED 16 months prior to process date.	11	9(11)
980	990	ADDRESSES MATCHED MONTH 17 Total number of matches made with MED 17 months prior to process date.	11	9(11)
991	1001	ADDRESSES MATCHED MONTH 18 Total number of matches made with MED 18 months prior to process date.	11	9(11)
1002	1012	ADDRESSES MATCHED MONTH 19 Total number of matches made with MED 19 months prior to process date.	11	9(11)
1013	1023	ADDRESSES MATCHED MONTH 20 Total number of matches made with MED 20 months prior to process date.	11	9(11)
1024	1034	ADDRESSES MATCHED MONTH 21 Total number of matches made with MED 21 months prior to process date.	11	9(11)
1035	1045	ADDRESSES MATCHED MONTH 22 Total number of matches made with MED 22 months prior to process date.	11	9(11)
1046	1056	ADDRESSES MATCHED MONTH 23 Total number of matches made with MED 23 months prior to process date.	11	9(11)
1057	1067	ADDRESSES MATCHED MONTH 24 Total number of matches made with MED 24 months prior to process date.	11	9(11)
1068	1078	ADDRESSES MATCHED MONTH 25 Total number of matches made with MED 25 months prior to process date.	11	9(11)
1079	1089	ADDRESSES MATCHED MONTH 26 Total number of matches made with MED 26 months prior to process date.	11	9(11)
1090	1100	ADDRESSES MATCHED MONTH 27 Total number of matches made with MED 27 months prior to process date.	11	9(11)
1101	1111	ADDRESSES MATCHED MONTH 28 Total number of matches made with MED 28 months prior to process date.	11	9(11)
1112	1122	ADDRESSES MATCHED MONTH 29 Total number of matches made with MED 29 months prior to process date.	11	9(11)
1123	1133	ADDRESSES MATCHED MONTH 30 Total number of matches made with MED 30 months prior to process date.	11	9(11)
1134	1144	ADDRESSES MATCHED MONTH 31 Total number of matches made with MED 31 months prior to process date.	11	9(11)

<b>NCOA<sup>Link</sup> MONTHLY CUSTOMER SERVICE LOG</b> <b>END USER MAILER</b> <b>Detail Record</b> <b>(page 5 of 5)</b>				
RECORD FROM	POSITION TO	FIELD NAME and DESCRIPTION	LENGTH	COBOL
1145	1155	ADDRESSES MATCHED MONTH 32 Total number of matches made with MED 32 months prior to process date.	11	9(11)
1156	1166	ADDRESSES MATCHED MONTH 33 Total number of matches made with MED 33 months prior to process date.	11	9(11)
1167	1177	ADDRESSES MATCHED MONTH 34 Total number of matches made with MED 34 months prior to process date.	11	9(11)
1178	1188	ADDRESSES MATCHED MONTH 35 Total number of matches made with MED 35 months prior to process date.	11	9(11)
1189	1199	ADDRESSES MATCHED MONTH 36 Total number of matches made with MED 36 months prior to process date.	11	9(11)
1200	1210	ADDRESSES MATCHED MONTH 37 Total number of matches made with MED 37 months prior to process date.	11	9(11)
1211	1221	ADDRESSES MATCHED MONTH 38 Total number of matches made with MED 38 months prior to process date.	11	9(11)
1222	1232	ADDRESSES MATCHED MONTH 39 Total number of matches made with MED 39 months prior to process date.	11	9(11)
1233	1243	ADDRESSES MATCHED MONTH 40 Total number of matches made with MED 40 months prior to process date.	11	9(11)
1244	1254	ADDRESSES MATCHED MONTH 41 Total number of matches made with MED 41 months prior to process date.	11	9(11)
1255	1265	ADDRESSES MATCHED MONTH 42 Total number of matches made with MED 42 months prior to process date.	11	9(11)
1266	1276	ADDRESSES MATCHED MONTH 43 Total number of matches made with MED 43 months prior to process date.	11	9(11)
1277	1287	ADDRESSES MATCHED MONTH 44 Total number of matches made with MED 44 months prior to process date.	11	9(11)
1288	1298	ADDRESSES MATCHED MONTH 45 Total number of matches made with MED 45 months prior to process date.	11	9(11)
1299	1309	ADDRESSES MATCHED MONTH 46 Total number of matches made with MED 46 months prior to process date.	11	9(11)
1310	1320	ADDRESSES MATCHED MONTH 47 Total number of matches made with MED 47 months prior to process date.	11	9(11)
1321	1331	ADDRESSES MATCHED MONTH 48 Total number of matches made with MED 48 months or more prior to process date.	11	9(11)
		List Identification		
1332	1361	MAILING LIST NAME Name of mailing list processed. NOTE: If master house list and/or list owner's only mailing list, company name is sufficient.	30	X(30)
1362	1600	FILLER	239	X(239)
		CR/LF Carriage Return/Line Feed required at end of each record.		

**Note:** All numeric fields are right justified, zero filled.  
 All alphanumeric fields are left justified, spaced filled.

**Note:** This file shall be submitted in standard ASCII text format and electronically transmitted to the NCSC. The file shall be named using "C," the 4-character code assigned by the NCSC, the 1-character code for the month and the year with an extension of DAT. (e.g. CNAAC02.DAT)

## Figure 1 NCOA<sup>Link</sup> Footnotes and Descriptions

Code = Footnote Code

Address = "Y" – New Address provided

"N" – New Address not provided

Description = Explanation of Footnote code

How = "D" = Derived by data – returned in lieu of 11 digit

"S" = Derived by software

Code	Description	Address	How
A	COA Match - The input record was matched to the master file. A new address could be furnished.	Y	D
01	Found COA: Foreign Move – The input record matched to the master file but new address was outside USPS delivery area.	N	D
02	Found COA: Moved Left No Address – The input record matched to the master file but new address not provided to USPS.	N	D
03	Found COA: Box Closed No Order – The Input record matched a PO Box that has been closed without a forwarding address provided	N	D
04	Found COA: Family Match: Street Address with Secondary – The input record matched to a family COA from a street address which contained secondary information; the input record does not contain secondary information. This address match situation requires individual name matching logic to obtain a COA match and individual names do not match.	N	D
05	Found COA: New 11-digit DPBC is Ambiguous – The input record matched to the master file, but the new address could not be converted to a deliverable address because the DPBC represents more than one delivery point.	N	D
06	Cannot Match COA: Conflicting Directions: Middle Name Related – The input record matched to an individual move on the master file; however, there is more than one COA for the match algorithm and the middle names or initials on the COAs are different. Therefore, a single match result could not be determined.	N	D
07	Cannot Match COA: Conflicting Directions: Gender Related – The input record matched to an individual move on the master file; however, there is more than one COA for the match algorithm and the genders of the names on the COAs are different. Therefore, a single match result could not be determined.	N	D
08	Cannot Match COA: Other Conflicting Instructions – The input record matches to two COAs; the two address records in the master file were compared and due to differences in the new addresses, a match could not be made.	N	D
09	Cannot Match COA: Family Match: High Rise Default – The input record matched to a family COA from a High Rise address ZIP+4 coded to the building default. This address match situation requires individual name matching logic to obtain a COA match and individual names do not match.	N	D
10	Cannot Match COA: Family Match: Rural Default – The input record matched to a family COA from a Rural Route or Highway Contract Route address ZIP+4 coded to the route default. This address situation requires individual name matching logic to obtain a COA match and individual names do not match.	N	D
11	Cannot Match COA: Individual Match: Insufficient COA Name for Match – There is an individual record on the master file with the same surname and address but there is insufficient name information on the master file record to produce a match using individual matching logic.	N	D
12	Found COA: Middle Name Test Failed – There is a master file record for an individual move but the middle name or initial is not the same on the input and master file records.	N	S
13	Found COA: Gender Test Failed – There is a master file record for an individual move but the gender of the name on the input record conflicts with the gender of the name on the the master file record.	N	S



## NCOA<sup>Link</sup> Footnotes and Descriptions – continued

Code	Description	Address	How
14	Found COA: New Address Would Not Convert at Run Time – The input record matched to a master file record but the new address could not be converted to a deliverable address.	N	S
15	Found COA: Individual Name Insufficient – There is a master file record for an individual move; however, a match cannot be made because the input record or the master file record does not contain a first name or contains initials only.	N	S
16	Found COA: Secondary Number Discrepancy – There is a master file record for an individual move but there is conflicting secondary information on the input and master file records.	N	S
17	Found COA: Different First Name – There is a master file record for an individual move but the first name is not the same on the input and master file records.	N	S
18	Cannot Match COA: Family Match: General Delivery – The input record matched to a family COA from a General Delivery address. This address situation requires individual name matching logic to obtain a COA match and individual names do not match.	N	D
19	Found COA: New Address not ZIP+4 codeable – There is a change of address on file but the new address cannot be ZIP+4 coded and therefore there is no 11-digit DPBC to store or return.	N	D
20	Cannot Match COA: Conflicting Directions after re-chaining – Multiple master file records were potential matches for the input record; however, the master file records contained different new addresses and a single match result could not be determined.	N	D
91	COA Match: Secondary Number dropped from COA – The input record matched to a master file record, but the master file record had a secondary number and the input address did not.	Y	D
92	COA Match: Secondary Number Dropped from input address – The input record matched to a master file record, but the input address had a secondary number and the master file record did not.	Y	D

## Other Footnote Descriptions

Code	Description	Process
AA	Input Address ZIP+4 match	ZIP+4
A1	Input Address ZIP+4 not matched	ZIP+4
M1	Input Address Primary Number Missing	ZIP+4
M3	Input Address Primary Number Invalid	ZIP+4
P1	Input Address Missing PO, RR, or HC Box number	ZIP+4
P3	Input Address Invalid PO, RR, or HC Box number	ZIP+4
BB	Input Address DPV matched (all components)	DPV
RR	Input Address DPV matched to CMRA	DPV
CC	Input Address DPV Primary Number match, Secondary Number not Matched (secondary number present but is not DPV confirmed)	DPV
N1	Input Address DPV Primary Number match, Highrise Address Missing Secondary Number	DPV
R1	Input Address DPV matched to CMRA but PMB Number not Present	DPV

## Figure 2

Per the Domestic Mail Manual (DMM), the ZIP+4 and City/State data must be updated by ZIP+4 and City/State Product users within 45 days of the release date. For general use, a data release is valid for 105 days from the USPS release date and users may elect to receive bi-monthly updates. However, per the NCOA<sup>Link</sup> License Agreement, NCOA<sup>Link</sup> Licensees are required to update these files on a monthly basis in order to obtain the best possible results from the NCOA<sup>Link</sup> process. The following chart is provided to assist in determining which data release is considered the most current for NCOA<sup>Link</sup> Licensees.

Release	Required Use Date	Last Use Date
January 15	March 1	March 31
February 15	April 1	April 30
March 15	May 1	May 31
April 15	June 1	June 30
May 15	July 1	July 31
June 15	August 1	August 31
July 15	September 1	September 30
August 15	October 1	October 31
September 15	November 1	November 30
October 15	December 1	December 31
November 15	January 1	January 31
December 15	February 1	February 28 (Feb 29 in leap year)

**FIGURE 3**

TEST CLIENT INPUT FILE HEADER RECORD				
RECORD FROM	POSITION TO	FIELD NAME	LENGTH	COBOL
1	8	NCSC AUDIT FILE CREATED DATE(YYYYMMDD)	8	9(08)
9	14	NCSC AUDIT FILE CREATED TIME(HHMMSS)	6	9(06)
15	18	NCSC AUDIT FILE NUMBER	4	9(04)
19	26	NCSC NCOA <sup>Link</sup> RELEASE DATE	8	9(08)
27	34	NCSC ZIP+4 RELEASE DATE	8	9(08)
35	42	NCSC DPV RELEASE DATE	8	9(08)
43	43	NCSC TYPE (Audit, Certification, Stage)	1	X(01)
44	298	FILLER	255	X(255)
299	300	CARRIAGE RETURN LINE FEED	2	X(02)

TEST CLIENT INPUT FILE DETAIL RECORD				
RECORD FROM	POSITION TO	FIELD NAME	LENGTH	COBOL
1	28	INPUT CUSTOMER KEY	28	X(28)
29	29	INPUT NAME PARSED (Y,N)	1	X(01)
30	95	INPUT CUSTOMER NAME	66	X(66)
	NOTE:	The information found in the INPUT CUSTOMER NAME will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
30	35	INPUT PREFIX TITLES	6	X(06)
36	50	INPUT CUSTOMER FIRST NAME	15	X(15)
51	65	INPUT CUSTOMER MIDDLE NAME	15	X(15)
66	85	INPUT CUSTOMER LAST NAME	20	X(20)
86	91	INPUT SUFFIX TITLES	6	X(06)
92	95	FILLER	4	X(04)
96	96	INPUT ADDRESS PARSED (Y,N)	1	X(01)
97	191	INPUT CUSTOMER ADDRESS	95	X(95)
	NOTE:	The information found in the INPUT CUSTOMER ADDRESS will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
97	124	INPUT CUSTOMER URBANIZATION NAME	28	X(28)
125	134	INPUT PARSED PRIMARY NUMBER	10	X(10)
135	136	INPUT PARSED PRE-DIRECTIONAL	2	X(02)
137	164	INPUT PARSED PRIMARY NAME	28	X(28)
165	168	INPUT PARSED SUFFIX	4	X(04)
169	170	INPUT PARSED POST-DIRECTIONAL	2	X(02)
171	174	INPUT PARSED UNIT DESIGNATOR	4	X(04)
175	182	INPUT PARSED SECONDARY NUMBER	8	X(08)
183	191	FILLER	9	X(09)
192	192	INPUT LAST LINE PARSED (Y,N)	1	X(01)
193	234	CUSTOMER LAST LINE	42	X(42)
	NOTE:	The information found in the INPUT CUSTOMER LAST LINE will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
193	220	INPUT CITY NAME	28	X(28)
221	222	INPUT STATE	2	X(02)
223	227	INPUT FIVE DIGIT ZIP	5	X(05)
228	231	INPUT ZIP+4 ADDON	4	X(04)
232	234	FILLER	3	X(03)
235	298	FILLER	64	X(64)
299	300	CARRIAGE RETURN LINE FEED	2	X(02)

TEST CLIENT OUTPUT FILE HEADER RECORD				
RECORD FROM	POSITION TO	FIELD NAME	LENGTH	COBOL
1	8	NCSC AUDIT FILE CREATED DATE(YYYYMMDD)	8	9(08)
9	14	NCSC AUDIT FILE CREATED TIME(HHMMSS)	6	9(06)
15	18	NCSC AUDIT FILE NUMBER	4	9(04)
19	26	NCSC NCOA <sup>Link</sup> RELEASE DATE	8	9(08)
27	34	NCSC ZIP+4 RELEASE DATE	8	9(08)
35	42	NCSC DPV RELEASE DATE	8	9(08)
43	43	NCSC TYPE (Audit, Certification, Stage)	1	X(01)
44	298	FILLER	255	X(255)
299	306	OUTPUT AUDIT FILE CREATED DATE(YYYYMMDD)	8	9(08)
307	312	OUTPUT AUDIT FILE CREATED TIME(HHMMSS)	6	9(06)
313	320	PROCESSED AGAINST NCOA <sup>Link</sup> RELEASE DATE	8	9(08)
321	328	PROCESSED AGAINST ZIP+4 RELEASE DATE	8	9(08)
329	336	PROCESSED AGAINST DPV RELEASE DATE	8	9(08)
337	340	PROCESSED ON PLATFORM ID	4	X(04)
341	998	FILLER	658	X(658)
999	1000	CARRIAGE RETURN LINE FEED	2	X(02)

TEST CLIENT OUTPUT FILE DETAIL RECORD Page 1 of 2				
RECORD FROM	POSITION TO	FIELD NAME	LENGTH	COBOL
1	28	INPUT CUSTOMER KEY	28	X(28)
29	29	INPUT NAME PARSED (Y,N)	1	X(01)
30	95	INPUT CUSTOMER NAME	66	X(66)
	NOTE:	The information found in the INPUT CUSTOMER NAME will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
30	35	INPUT PREFIX TITLES	6	X(06)
36	50	INPUT CUSTOMER FIRST NAME	15	X(15)
51	65	INPUT CUSTOMER MIDDLE NAME	15	X(15)
66	85	INPUT CUSTOMER LAST NAME	20	X(20)
86	91	INPUT SUFFIX TITLES	6	X(06)
92	95	FILLER	4	X(04)
96	96	INPUT ADDRESS PARSED (Y,N)	1	X(01)
97	191	INPUT CUSTOMER ADDRESS	95	X(95)
	NOTE:	The information found in the INPUT CUSTOMER ADDRESS will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
97	124	INPUT CUSTOMER URBANIZATION NAME	28	X(28)
125	134	INPUT PARSED PRIMARY NUMBER	10	X(10)
135	136	INPUT PARSED PRE-DIRECTIONAL	2	X(02)
137	164	INPUT PARSED PRIMARY NAME	28	X(28)
165	168	INPUT PARSED SUFFIX	4	X(04)
169	170	INPUT PARSED POST-DIRECTIONAL	2	X(02)
171	174	INPUT PARSED UNIT DESIGNATOR	4	X(04)
175	182	INPUT PARSED SECONDARY NUMBER	8	X(08)
183	191	FILLER	9	X(09)
192	192	INPUT LAST LINE PARSED (Y,N)	1	X(01)
193	234	CUSTOMER LAST LINE	42	X(42)
	NOTE:	The information found in the INPUT CUSTOMER LAST LINE will be fixed length. The data contained within the field may be presented as a single field or it may be parsed.		
193	220	INPUT CITY NAME	28	X(28)
221	222	INPUT STATE	2	X(02)
223	227	INPUT FIVE DIGIT ZIP	5	X(05)
228	231	INPUT ZIP+4 ADDON	4	X(04)
232	234	FILLER	3	X(03)
235	298	FILLER	64	X(64)
	NOTE:	The following fields reflect the results of input name after the utilization of a name parser. This is the final parsed name information utilized in the process which was responsible for the final result.		
299	304	QUERY PREFIX TITLE	6	X(06)
305	319	QUERY CUSTOMER FIRST NAME	15	X(15)
320	334	QUERY CUSTOMER MIDDLE NAME	15	X(15)
335	354	QUERY CUSTOMER LAST NAME	20	X(20)
355	360	QUERY SUFFIX TITLE	6	X(06)

TEST CLIENT OUTPUT FILE DETAIL RECORD Page 2 of 2				
RECORD FROM	POSITION TO	FIELD NAME	LENGTH	COBOL
	NOTE:	The following fields reflect the results of the input address after the utilization of a certified CASS ZIP+4 system. This is the final address information that was utilized in the process which was responsible for the final result.		
361	388	QUERY CUSTOMER URBANIZATION NAME	28	X(28)
389	398	QUERY PARSED PRIMARY NUMBER	10	X(10)
399	400	QUERY PARSED PRE-DIRECTIONAL	2	X(02)
401	428	QUERY PARSED PRIMARY NAME	28	X(28)
429	432	QUERY PARSED SUFFIX	4	X(04)
433	434	QUERY PARSED POST-DIRECTIONAL	2	X(02)
435	438	QUERY PARSED UNIT DESIGNATOR	4	X(04)
439	446	QUERY PARSED SECONDARY NUMBER	08	X(08)
447	474	QUERY PARSED CITY NAME	28	X(28)
475	476	QUERY PARSED STATE	2	X(02)
477	481	QUERY FIVE DIGIT ZIP	5	X(05)
482	485	QUERY ZIP+4 ADDON	4	X(04)
486	513	RESULT CUSTOMER URBANIZATION NAME	28	X(28)
514	523	RESULT PARSED PRIMARY NUMBER	10	X(10)
524	525	RESULT PARSED PRE-DIRECTIONAL	2	X(02)
526	553	RESULT PARSED PRIMARY NAME	28	X(28)
554	557	RESULT PARSED SUFFIX	4	X(04)
558	559	RESULT PARSED POST-DIRECTIONAL	2	X(02)
560	563	RESULT PARSED UNIT DESIGNATOR	4	X(04)
564	571	RESULT PARSED SECONDARY NUMBER	08	X(08)
572	599	RESULT PARSED CITY NAME	28	X(28)
600	601	RESULT PARSED STATE	2	X(02)
602	606	RESULT FIVE DIGIT ZIP	5	X(05)
607	610	RESULT ZIP+4 ADDON	4	X(04)
611	613	RESULT DBPC (including check digit)	3	X(03)
614	617	RESULT CARRIER RTE	4	X(04)
618	618	RESULT DROP FLAG	1	X(01)
619	619	RESULT DROP N FLAG	1	X(01)
620	625	RESULT MOVE EFFECTIVE DATE	6	X(06)
626	627	RESULT MIDDLE NAME	2	X(02)
628	628	RESULT GENDER	1	X(01)
629	636	RESULT HINT BYTE (after expansion)	8	X(08)
637	638	RESULT LINK FOOTNOTE	2	X(02)
639	640	RESULT ZIP+4 FOOTNOTE	2	X(02)
641	642	RESULT DPV FOOTNOTE	2	X(02)
643	658	HEX VALUE OF THE EMDP (from input address)	16	X(16)
659	698	HEX VALUE OF THE SHA OF EMPD (from input address)	40	X(40)
699	714	HEX VALUE OF THE FIRST 8 CHARACTERS OF 48 BYTE OBJECT	16	X(16)
715	729	FIRST NAME OF THE 48 BYTE OBJECT	15	X(15)
730	749	LAST NAME OF THE 48 BYTE OBJECT	20	X(20)
750	754	SUFFIX NAME OF THE 48 BYTE OBJECT	5	X(05)
755	794	HEX VALUE OF THE SHA OF 48 BYTE OBJECT	40	X(40)
795	810	HEX VALUE OF THE DATA RETRIEVED (before reorder)	16	X(16)
811	827	DECIMAL VALUE OF THE 17 DIGIT RESULT VALUE	17	X(17)
828	998	FILLER	171	X(171)
999	1000	CARRIAGE RETURN LINE FEED	2	X(02)